

REMARKS

In view of the foregoing amendments and following remarks, reconsideration and allowance of this patent application is earnestly solicited. Claims 1 and 3-16 are pending in this application. Claims 1 and 3-16 stand rejected. Claims 1, 4 and 16 are the independent claims. Claims 4, 5 and 16 have been amended. No new matter has been introduced.

I. Interview Summary

Applicants' undersigned attorneys, Aaron Haleva and Leslie Nguyen, would like to thank Examiner Le and Supervisory Examiner Patel for the courtesies extended during the in-person interview conducted on February 13, 2008. In view of the Examiner's continued reliance on the Muzslay reference (i.e., the principal reference cited in the rejection of independent claim 1 of the present application on obviousness grounds as presented in the final Office Action mailed on August 20, 2007), which necessitated the filing of a Request for Continued Examination on December 20, 2007, Applicants' attorneys had requested the interview prior to the issuance of the present Office Action to discuss the amendments and arguments set forth in Applicants' Supplemental Amendment and Response also dated December 20, 2007, so as to advance the prosecution of this case.

During the interview, Applicants' undersigned attorneys specifically addressed the application of the Muzslay patent and argued that Muzslay actually teaches away from the claimed invention because it discloses a fuel injector adapter (14) for permanent mounting on a straight-type fuel injector (12) as opposed to Applicants' claimed invention which provides a pressure-tight contact having a non-permanent readily interchangeable, connector shell. Thus, as Applicants' attorneys stressed, Muzslay describes a retrofit device and does not enable let alone contemplate a readily interchangeable construction as claimed in the present application.

In response, Examiner Le and Supervisory Examiner Patel maintained that Muzslay renders independent claim 1 unpatentable arguing that, while it is the case that the fuel injector adapter is permanently mounted on the straight fuel injector, the adapter may be, at some point interchangeable based on the “needed configuration of the connector.” Applicants responded that Muzslay does not support such a contorted interpretation, especially as no adapter other than one that couples to an inclined connector is described in Muzslay, and no person skilled in the art would arguably understand the permanently affixed Muzslay adapter to teach or suggest something removable and interchangeable. When Applicants’ attorneys recalled to the Examiners that in a prior telephonic interview on October 18, 2007, Examiner Le had herself suggested that independent claim 1 be amended to include the “removably” limitation, as presently claimed, to traverse the cited art, the Examiner and Supervisory Examiner responded that, even though an agreement was previously reached, a subsequent internal quality control review of the application at the PTO prevented the Examiners from honoring it. Given the steadfastness of this internal quality control group (exactly who this group includes and the rationale behind its actions were not made known to Applicants), the Examiners intimated that Applicants may likely receive a more receptive audience in the Board of Patent Appeals and Interferences.

II. Detailed Response

In the Office Action, independent claims 1 and 16 and dependent claims 3, 12, 13 and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Muzslay in view of Ogawa. Applicants respectfully traverse the foregoing claim rejections for the reasons set forth hereinafter.

As set forth in detail in the present application, as further described in previous submissions, and as reiterated in at least two Examiner interviews, Applicants’ invention is

directed to a new pressure-tight contact device of the type employed, for example, in connection with a pressure-tight encapsulated electric motor for driving a compressor used in a vehicle air suspension system. The inventive contact device includes an insulator extending through and sealed relative to a pressure-tight housing. One or more contact pins (electrically connected to the motor, for example) are retained in and extend through the insulator and are sealed relative to the insulator. A connector shell is positioned on the insulator, sealed relative to the insulator, and removably affixed to the insulator or the housing to form part of the contact device. The connector shell includes a terminal receptacle or socket for engaging a separate mating connector attached to an electric connecting cable (*i.e.*, a plug). One or more contact tabs are disposed in the connector shell in secure electrical contact with the contact pin(s) and extend into the terminal socket to engage the mating connector (plug). The connector shell is one of a set of interchangeable connector shells having different configurations for mating with different, corresponding plugs.

Thus, Applicants' connector shell provides a readily interchangeable contact assembly interposed between a contact pin (*e.g.*, leading to the motor or other encapsulated device) and a plug (*e.g.*, leading to current supply lines or further signal lines). As explained below, such a novel construction and arrangement is neither taught nor suggested by Muzslay or Ogawa, whether taken alone or in combination.

Muzslay describes a fuel injector adapter (14) for permanent mounting on a straight fuel injector (12) so as to accommodate a harness connector (16) that is actually designed for an inclined fuel injector. Muzslay describes a retrofit device.

More particularly, the Muzslay adapter includes a housing (40) with a lower housing part (42) that opens along a downward axis (44) and an upper housing part (46) that

opens along an upwardly inclined axis (50) (45° from vertical). A pair of bent, plate-like contacts (52, 54) are mounted in the housing (40), with each contact having an upper part laying within the upper housing part (46) and extending along the inclined axis (50), and a lower contact part lying in the lower housing part (42) and extending perpendicular to the downward axis (44), to electrically connect the inclined connector with the base. The lower housing part (42) is permanently mounted on an upper end (30) of the straight fuel injector (12), with injector terminals (24, 26) projecting through holes in the contact lower parts to hold the contacts (52, 54) securely in position. The fuel injectors (12) are mounted on a fuel rail (20). See Muzslay at Abstract and 2:36-50.

Muzslay nowhere teaches or suggests a removable connector shell that is one of a set of interchangeable connector shells having different configurations suitable for engaging various corresponding mating connectors having corresponding mating configurations, as affirmatively claimed in the present application. Rather, Muzslay describes only a single adapter configuration. Muzslay at Figs. 2-3. Muzslay is, as noted, essentially a retrofit device. The single adapter configuration described in Muzslay has a singular purpose -- to allow an inclined-type connector to be permanently and exclusively mounted on a straight-type fuel injector. Muzslay at Abstract; at 1:5-20; and at 4:24-28. Thus, Muzslay does not teach or suggest a readily interchangeable adapter -- one that is removably affixed. On the contrary, Muzslay teaches away from such a construction where it explicitly states that fuel injector adapter (14) is to be permanently mounted on straight fuel injector (12). *Id.* at 1:37-40 ("the lower housing part is permanently mounted on the top end of an injector body"); 4:3-18.

Moreover, further corroborating the aim of Muzslay, there is no contemplated set of adapters (14) designed to mate with a corresponding set of harness connectors (16), each

element of such set of adapters, for example, having injector terminals extending at a different angle θ from the vertical so as to be attachable to a corresponding harness connector having the same angle θ from the vertical (as shown in Fig. 1, the respective angles of the adapter (14) and the harness connector (16) from the vertical being congruent, as they are alternate interior angles on two parallel planes). Without such a contemplated set of adapters, corresponding to a contemplated set of harness connectors, there is simply no reason for any adapter to be removably affixed. Thus, the Muzslay adapter is not removably affixed; it is permanently affixed once it is installed on the injector. Muzslay at 1:37-40; 4:3-18.

As to the Examiner's suggestion that the adapter disclosed in Muzslay need not necessarily be permanently held in place, citing Muzslay at 4:3-23 ("It is highly desirable that once the adapter is installed on an injector, that it be permanently held in place. This prevents movement of the contacts if the adapter were to be pulled off the fuel injector before unmating from a harness connector. As shown in FIG. 2, applicant utilizes the adjusting holes 34 in the injector connector end 30 to lock the adapter in place."), Applicants respectfully submit that this in no way teaches a removable adapter by design so as to be easily interchangeable with other members of a set of adapters. Rather, Muzslay merely stresses that permanently holding the adapter in place on the fuel injector prevents movement or bending of the contacts (24) and (26) if the adapter and harness connector combination (still mated) is pulled from the fuel injector.

Given the nature of fuel injectors, one of ordinary skill would readily appreciate that, in practice, the implementation of the single adapter configuration described in Muzslay would require a visit to a vehicle service shop in order to dismantle a straight connector from the straight injector and replace it with an adapter/inclined connector combination. This is about as interchangeable as a person's heart is interchangeable.

Indeed, federal courts have interpreted “removably affixed” claim terms to mean easily removable and interchangeable rejecting the very same type of untenable interpretation of the term propounded by the Examiners here. For example, in an opinion and order from the U.S. District Court for the Eastern District of New York in *Bengis v. World Wide Packaging, Inc.* (04-cv-5354) (see Exhibit A attached hereto), the court construed the claims of a patent for a dual purpose cosmetic container where one part is configured to removably engage one of a set of interchangeable attachments. The accused infringing devices were dual purpose cosmetic containers with non-removable, non-interchangeable components. The patent holder argued that the accused infringing devices infringed the patent because the components of the accused devices could be forcibly separated. The court held that the claim language “removable coupling” does not encompass or suggest forceful separation. Rather, the court applied the plain and ordinary meaning of the words and found that “removable coupling” contemplates the joining of two pieces in a manner that allows for their reasonable separation in the ordinary course -- that is, in a non-permanent fashion.

The position taken by the Examiners that something that is permanently mounted can suggest a construction that is removably affixed defies logic. Indeed, it runs contrary to recognized patent principles that are founded on the application of logic, such as, for example, claim interpretation under the specific exclusion principle. By this principle, when a claim is limited in a way that plainly and necessarily excludes a structural feature that is the opposite of the one recited in the claim, the excluded feature cannot be brought within the scope of patent protection through the doctrine of equivalents. See *Capital Bridge Co., LTD. v IVL Tech., LTD.*, 2006 U.S. Dist. LEXIS 62801 (S.D.N.Y. August 30, 2006), aff'd 2007 U.S. App. LEXIS 19103 (Fed. Cir. Aug. 10, 2007) (see attached Exhibit B). In other words, the opposite of something

cannot also be its equivalent. This is a logical principle that bears on the present case – “permanent” cannot logically be the equivalent of “removably affixed.”

The significant patentable differences between Muzslay and the present claimed invention may be further appreciated by looking to another art area -- that of hand held tools. Conventional screwdrivers with fixed shafts are known (*e.g.*, flathead and Phillips screwdrivers). Such conventional screwdrivers can be said to be analogous to the Muzslay technology in that they contemplate a single, permanently mated configuration (that of metal shaft and plastic handle). A standard screwdriver shaft is understood not to be removable. In contrast, screwdrivers with removable and interchangeable shafts, each such shaft having a different size or type of tip, have been patented, overcoming the known prior art of conventional “fixed” screwdrivers. *See, e.g.*, U.S. Patent No. 7,134,368 (“Interchangeable Screwdriver for Tool Bits”)(Exhibit C); U.S. Patent No. 6,425,307 (“Screwdriver Having a Plurality of Interchangeable Tips of Various Specifications”) (Exhibit D); and U.S. Patent No. 6,009,779 (“Screwdriver Set and Kit Having Variable Length Interchangeable Screwdriver Shafts and Extensions”) (Exhibit E). Putting aside that Muzslay is concerned with fuel injectors and the present invention with pressure tight contacts, just as the screwdrivers with removable and interchangeable tips distinguish over standard screwdrivers, the removable and interchangeable characteristics of the connector shell of the present claimed invention traverse the single, permanent configuration disclosed in Muzslay.

As another example, Applicants submit the ergonomic planar grading hand tool described in U.S. Patent No. 6,988,561, to Campbell (“Campbell”)(Exhibit F). Campbell claims, *inter alia*, “An ergonomic grading tool comprising: a handle comprising a base plate having a top and a bottom and fixedly attached to a sleeve designed to accommodate a removably affixed

handle rod; . . .” Campbell at 5:12-15 (claim 1). Campbell draws a clear distinction between “fixedly attached” -- as in Muzslay -- and “removably affixed” -- as in the presently claimed invention. Were these terms patentably synonymous, this claim element would be a tautology and meaningless.

Moreover, Campbell lists as prior art U.S. Patent No. 6,318,476, to Brewer (“Brewer”)(Exhibit G). Brewer explicitly has a fixed handle: “[t]he tool consists of a hoe type handle approximately 5 feet long made of an appropriate material and approximately 1 1/8 inch in diameter connected through a split pipe member to a single piece of five gauge steel 63/4 inches long by 6 to 20 inches wide.” Brewer at Abstract. Clearly, a claim element reciting a removably affixed handle rod, as in Campbell, is patentably distinct from a fixed handle as in Brewer.

Additional examples are legion in the ranks of issued U.S. patents (see also U.S. Patent No. 6,425,307)(Exhibit H).

In view of the foregoing, Applicants respectfully submit that Muzslay does not teach or suggest Applicants’ invention as presently claimed.

Ogawa does not overcome the severe deficiencies of Muzslay as a reference against the claimed invention. Ogawa describes embodiments of an electrical connector in threaded combination with a tube member used for making an electrical connection through a wall. Ogawa nowhere describes, teaches, or suggests the contact device of independent claims 1 and 16, comprising a connector shell removably affixed to at least one of an insulator and a housing, said connector shell being one of a set of interchangeable connector shells having different terminal socket configurations suitable for engaging various corresponding mating connectors having corresponding mating configurations.

Accordingly, independent claims 1 and 16 of the present application recite features and structure nowhere taught or suggested in either or both of the Muzslay and Ogawa references, and, thus, these claims are urged as patentable over these references, taken alone or in combination. It is further submitted that dependent claims 3, 12, 13 and 15 are also allowable for similar reasons. Notice to this effect is earnestly requested.

Dependent claim 14 stands separately rejected under 35 U.S.C. §103(a) as being unpatentable over Muzslay in view of Ogawa, and further in view of Nakamura. Applicants respectfully traverse the foregoing claim rejection for the reasons set forth hereinafter.

Applicants respectfully submit that dependent claim 14 is not only allowable by reason of its dependency from independent claim 1, and for the additional features and structure recited therein, but also because Nakamura does not remedy the severe deficiencies of Muzslay and Ogawa as discussed above. Nakamura, cited by the Examiner for its disclosure of a plurality of projections from at least one contact pin, describes embodiments of a waterproof connector having a small size due to the reduction of surplus space. Nakamura at Fig. 9. Nakamura nowhere teaches or suggests the contact device according to the present invention comprising an interchangeable connector shell with its plug receiving terminal socket including one or more contact tabs in electrical contact with one or more contact pins extending through the insulator.

Independent claim 4 and dependent claims 5-7 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Muzslay in view of Ogawa, and further in view of U.S. Patent No. 7,029,327 (“Devine”). First, these claims were previously found to be allowable, and Applicants fail to understand the paradigm shift. Second, Applicants respectfully traverse the foregoing claim rejections for the reasons set forth hereinafter.

Devine describes embodiments of a water tight device for connecting and sealing a coaxial transmission line connector with a signal source connector, wherein the device is capable of detecting water leakage into the connector. Devine is cited for its disclosure of an O-ring for sealing the insulator relative to the housing and an O-ring for sealing at least one contact pin relative to the insulator. However, Devine does not overcome the severe deficiencies of Muzslay and Ogawa as discussed above. Devine nowhere teaches or suggests a contact device comprising a removably affixed (interchangeable) connector shell with its plug receiving terminal socket including one or more contact tabs in electrical contact with one or more contact pins extending through the insulator. Indeed, the Examiner has consistently acknowledged as much when the Examiner allowed claim 4 in all prior Office Actions on the merits, including the Office Action preceding the present one wherein Muzslay was known to the Examiner.

Accordingly, independent claim 4 of the present application recites features and structure nowhere found in the Muzslay, Ogawa and Devine references, and, thus claim 4 is urged as patentable over these references, whether taken alone or in combination. Dependent claims 5 and 7-11 are thus also urged as allowable for similar reasons.

Dependent claims 8 and 9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Muzslay in view of Ogawa and Devine, and further in view of U.S. Patent No. 5,295,863 (“Cady”). Applicants respectfully traverse.

Applicants respectfully submit that dependent claims 8 and 9 are allowable by reason of their various dependencies from independent claim 4, as well as for the additional features and structure recited therein. In addition, Cady does not remedy the severe deficiencies of Muzslay, Ogawa and Devine as discussed above. Cady describes embodiments of an electrical connector for connecting multi-wire coaxial cables. The connector includes a housing

with a cylindrical bore extending through the housing for each wire. When the center conductor of each wire is coupled to a conductive pin that is then inserted into the cylindrical bore, the outer conductive shield of each wire is coupled with the housing and with the outer conductive shields of all the other wires in the cable. The Examiner cites Cady for its disclosure of a conductive pin having a flared portion, which the Examiner equates to nose members of a contact tab. The Examiner further relies on this flared portion to support the argument that it would have been obvious to one of ordinary skill in the art to crimp the flared portion of the conductive pin. However, Cady nowhere teaches or suggests the contact device according to the present invention comprising the removably affixed (interchangeable) connector shell with its plug receiving terminal socket including one or more contact tabs in electrical contact with one or more contact pins extending through the insulator. Accordingly, Applicants respectfully submit that claims 8 and 9 are allowable over the cited combination of references by virtue of its dependency from claim 4, as well as for the additional features and structures recited therein. Notice to this effect is earnestly requested.

Dependent claim 10 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Muzslay in view of Ogawa and Devine, and further in view of Klemen. Applicants respectfully traverse.

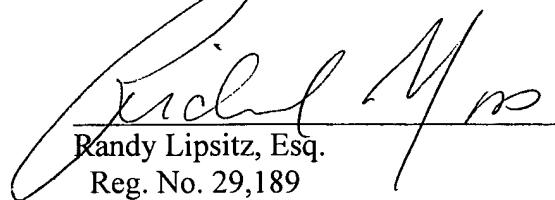
Applicants respectfully submit that dependent claim 10 is not only allowable by reason of its dependency from independent claim 4, and for the additional features and structure recited therein, but also because it does not remedy the severe deficiencies of Muzslay, Ogawa and Devine as discussed above. As previously submitted, Klemen describes embodiments of an electrical interface connector assembly that blocks the intrusion of undesired substances and elements from the environment. The connector assembly has a generally U-shaped receptacle

that is incorporated in a motor housing. A sealing gasket overlies a connector block and is secured by a retainer plate that is fastened to the receptacle by screws. Klemen nowhere teaches or suggests the contact device according to the present invention comprising the removably affixed (interchangeable) connector shell with its plug receiving terminal socket including one or more contact tabs in electrical contact with one or more contact pins extending through the insulator. Indeed, Klemen is not even directed at the present invention, as it is primarily concerned with preventing the intrusion of undesired substances and elements from the environment past the connector assembly. Screws are used to force the retainer plate down to compress the sealing gasket to create an effective seal such that environmental substances and elements will be barred from the motor housing. Thus, claim 10 is respectfully asserted as allowable over the cited combination of references by virtue of its dependency from claim 4, as well as for the additional features and structures recited therein. Notice to this effect is earnestly requested.

On the basis of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for immediate allowance, and notice to this effect is respectfully requested. The Examiner is invited to contact Applicants' undersigned attorneys at the telephone number set forth below if it will advance the prosecution of this case.

No fee is believed due with this Response other than the \$460.00 fee associated with the Petition for a Two-Month Extension of Time submitted herewith. Please charge any fee deficiency and credit any overpayment to Deposit Account No. 50-0540.

Respectfully submitted,



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